

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	ECHO LAKE	Lake Area (ha):	5.66
Town:	CONWAY	Maximum Depth (m):	3.5
County:	CARROLL	Mean Depth (m):	2.2
River Basin:	CONNECTICUT	Volume (m³):	124000
Latitude:	44°44'03" N	Relative depth:	1.3
Longitude:	71°71'09" W	Shore Configuration:	1.19
Elevation (ft):	510	Areal water load (m/yr):	4.97
Shore length (m):	1000	Flushing Rate (yr⁻¹):	2.3
% Watershed Ponded:	0	P retention coeff.:	0.66
Watershed Area (ha)	46.4	Lake Type	natural

BIOLOGICAL:

17-Feb-04

09-Jul-03

DOM. PHYTOPLANKTON (% TOTAL)	#1	RHIZOLENIA 95%	ASTERIONELLA 45%
	#2		TRACHELOMONAS 30%
	#3		DICTYOSPHAERIUM 8%
CHLOROPHYLL-A (ug/L)			14.66
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 49%	KERATELLA 76%
	#2	POLYARTHRA 27%	POLYARTHRA 7%
	#3	ciliate spp. 13%	BOSMINA 5%
ROTIFERS/LITER		732	1000
MICROCRUSTACEA/LITER		4	185
ZOOPLANKTON ABUNDANCE (#/L)		853	1204
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			1.7
BOTTOM DISSOLVED OXYGEN (mg/L)		12.2	3.3
BACTERIA (E. coli, #/100ml)	#1		<10
	#2		<10
	#3		<10

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m):	None
Hypolimnion volume (m ³):	None
Anoxic Volume (m ³):	None

<u>CHEMICAL:</u>			Lake: ECHO LAKE Town: CONWAY			
	17-Feb-04		09-Jul-03			
DEPTH (M)	1.5	3.0	1.0		2.0	
pH (units)	5.3	5.1	5.4		5.5	
A.N.C. (Alkalinity)	0.4	0.0	0.0		0.3	
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05	
TOTAL KJELDHAL NITROGEN	0.30	0.30	0.50		0.50	
TOTAL PHOSPHORUS	0.019	0.025	0.032		0.049	
CONDUCTIVITY (umhos/cm)	16.7	16.5				
APPARENT COLOR (CPU)	9	9	28		26	
MAGNESIUM			0.15			
CALCIUM			< 1.0			
SODIUM			< 1.0			
POTASSIUM			0.44			
CHLORIDE	< 3	< 3	< 3		< 3	
SULFATE	3	3	2		2	
TN : TP	17	13	16		11	
CALCITE SATURATION INDEX						
All results in mg/L unless indicated otherwise						
<u>TROPIC CLASSIFICATION: 2003</u>						
	D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
	**	4	0	3	7	MESO
<u>COMMENTS:</u>						
<ol style="list-style-type: none"> 1. Previously surveyed in 1985. The trophic class went from oligotrophic in 1985 to mesotrophic in 2003, primarily because of increased algal growth. More frequent sampling is needed to determine if the increased chlorophyll concentration is a valid trend or within natural fluctuations. 2. Access is the portage of a canoe over the state park beach. 3. Although the lake is not officially listed as restricted to motor boats, the state park does not allow access for motor boats. 4. Water was cloudy with a blue-green cast, as if suspended clay particles were present. The chlorophyll level was somewhat elevated but the net plankton sample revealed no blue-green algae to be present. 5. Acid pond with essentially no buffering capacity (ANC). Phosphorus levels were somewhat elevated. 						

Echo Lake

Conway



5 foot depth contours

N



0 0.05 0.1 Kilometers



FIELD DATA SHEET

LAKE: ECHO LAKE

TOWN: CONWAY

DATE: 7/9/03

WEATHER: Hazy & breezy

[illegible]

SECCHI DEPTH (m) : 1.7

BOTTOM DEPTH (m) : 3.2

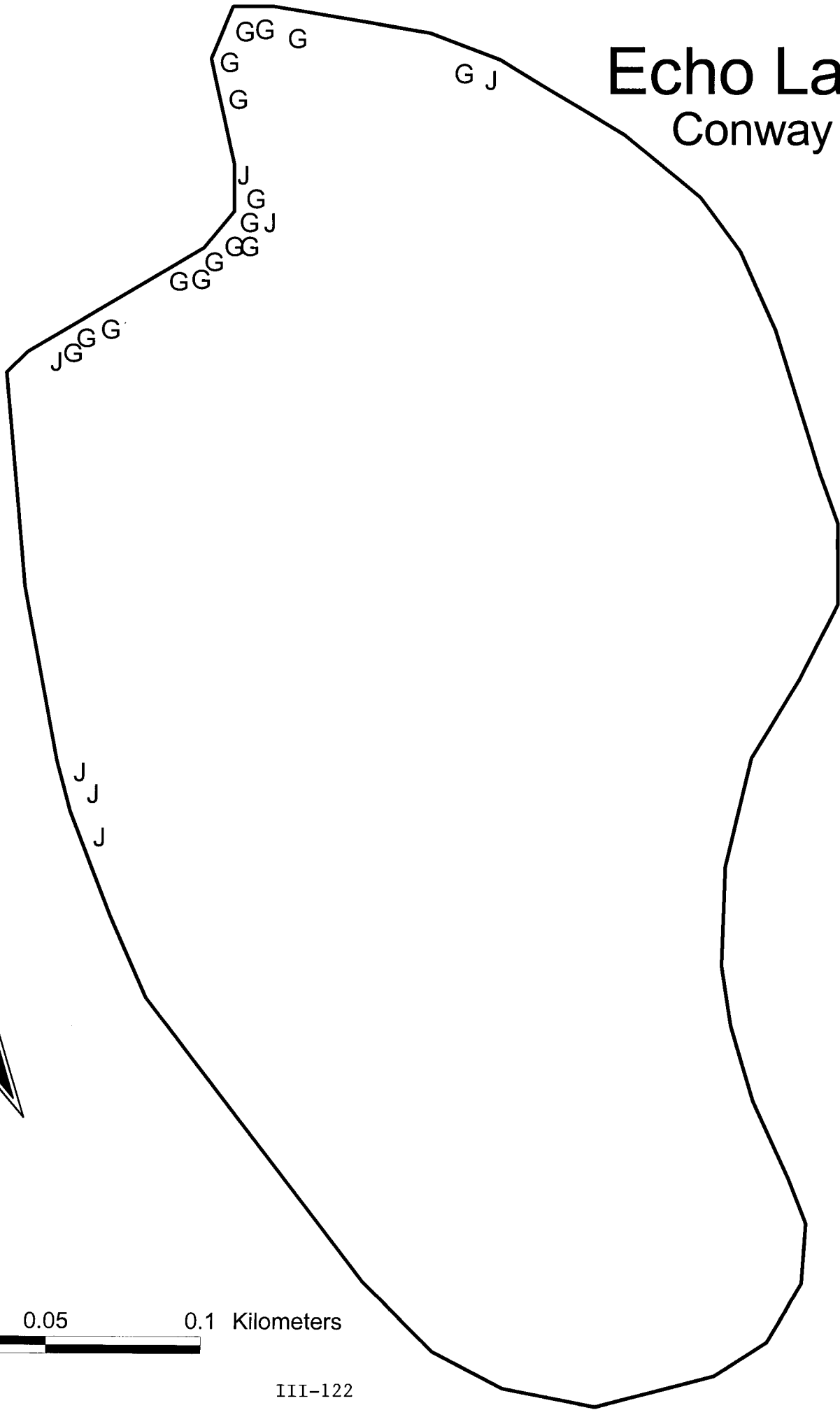
TIME: 1210

COMMENTS:

Echo Lake
Conway

0.05 0.1 Kilometers

III-122



Echo Lake
Conway

0.05 0.1 Kilometers

III-122

[illegible]